Microglia priming in the aging brain

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Propositions

1. Understanding aging is pivotal for the prevention of age-associated neurodegeneration and might be the reason for current therapeutic failures in neurodegenerative diseases particularly in Alzheimer's disease.

2. Age-associated microglia priming is predominantly associated with the white matter of the aging brain starting already at middle age.

3. In the white matter of the aging brain might lay answers unique to human neurophysiological processing, regarded in layman's terms as intellect as well as to neurodegenerative demise.

4. The striking phenotypic similarities between microglia in the aging brain and in a DNA repair deficient mouse model of accelerated aging emphasize that age-associated changes in neurons, long before occurrence of pathological changes such as amyloid accumulation are relevant for onset of neurodegeneration.

5. Telomere shortening induces a striking blood brain barrier leakage but does not result in microglia priming.

6. Cellular isolation methods that minimally alter their in-situ phenotype offer a chance to better understand cellular functionality and pathological response.

7. A new cultural experience teaches you to criticize/appreciate selective idiosyncrasies of your own background better and is more rewarding than what any educational degree can offer in lessons of life.

8. A reductionist approach helps the organized human mind to task efficiently but may not always be the niche for novelty; the present system for selecting scientific leaders is biased in favoring those good at executing the reductionist approach.

9. The best lesson that practicing science teaches is that it's all right to be wrong; there is always another road to follow.

10. A true measure of intelligence is one's ability to self-analyze, criticize and embrace positive change.